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[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR IRRADIATING A SCATTERING MEDIUM

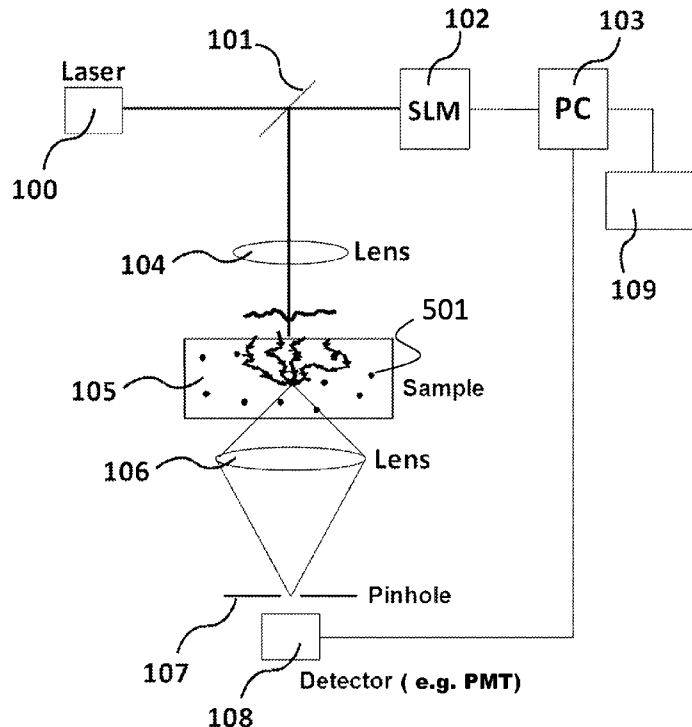


FIG. 1

(57) Abstract: An apparatus includes a light source (100) configured to emit an electromagnetic wave; a spatial light modulator (102) configured to modulate a wavefront of the electromagnetic wave to irradiate a sample (105); a plate (107) with an aperture; a lens unit (106) configured to set a focal point in the sample (105); a detector (108) configured to detect light coming from the focal point of the sample (105) through the aperture; and a controller (103) configured to control the spatial light modulator (102) based on the detected light by the detector (108). The lens unit (106) and the aperture in plate (107) form a confocal system.



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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. G01N21/45 G01N21/47 G01N21/49 A61B5/00 G02B21/00  
 G03H1/02 G03H1/04 G03H1/22 G02B26/08  
 ADD.  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
 A61B G01N G02B G03H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 EPO-Internal, WPI Data, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 587 832 A (KRAUSE ANDREW W [US]) 24 December 1996 (1996-12-24)	1-7
Y	column 2, line 18 - column 6, line 57; figures 1,2,5	8-12
X	----- WO 2010/084478 A2 (ECOLE POLYTECH [CH]; RACHET BASTIEN [CH]; MERENDA FABRICE [CH]; SALATH) 29 July 2010 (2010-07-29)	1-12
Y	pages 6,10,11; figure 1 page 22, line 27 - page 23, line 1 pages 27-28; figures 14,15 -----	8-12
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Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
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Date of the actual completion of the international search <b>11 May 2012</b>	Date of mailing of the international search report <b>25/05/2012</b>
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer <b>Duijs, Eric</b>
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## INTERNATIONAL SEARCH REPORT

International application No  
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>MENG CUI ET AL: "Implementation of a digital optical phase conjugation system and its application to study the robustness of turbidity suppression by phase conjugation", OPTICS EXPRESS, vol. 18, no. 4, 15 February 2010 (2010-02-15), page 3444, XP55026360, ISSN: 1094-4087, DOI: 10.1364/OE.18.003444 paragraphs [0002], [03.1]; figures 1,2 -----</p>	8-12

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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			US 5923466 A	13-07-1999
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			US 2011300490 A1	08-12-2011
			WO 2010084478 A2	29-07-2010
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